

REMARKS

This is in response to the Office Action of February 26, 2008. With this response claims 1, 9, 15 and 16 are amended, claims 4, 6 and 11 are canceled and all pending claims 1-3, 5, 7-10 and 12-16 are presented for reconsideration and favorable action.

In the Office Action, claim 1 was objected to. That claim has been amended and it is believed that that objection may be withdrawn.

Claims 1 and 11-12 were rejected based upon Non-Statutory Obviousness-Type Double Patenting based upon claim 9 of US 7,053,630 along with Blom et al. '307 or Damgaard et al. '890. With this response, a Terminal Disclaimer against US 7,053,630 is submitted. It is believed that the rejection may be withdrawn.

In Section 4 of the Office Action, claims 5, 6 and 11 were objected to under 35 U.S.C. § 1.75. With this response, claims 4, 6 and 11 have been canceled and it is believed that the objection may be withdrawn. It is believed claim 5 may remain in the application.

Claims 15 and 16 were rejected under 35 U.S.C. § 112. With this response those claims have been amended and it is believed that rejection may be withdrawn.

Claims 1-16 were rejected under 35 U.S.C. § 103 based upon Schultheiss (US 2002/0020216) in view of Blom et al. (6,026,307) or Damgaard et al. (6,150,890). It is believed that the pending claims are patentably distinct from these references.

A common problem in radar level gauging is that one and the same frequency may not work equally well in all environments, for all applications, etc. For example, a specific frequency may be un-advantageous due to the specific conditions at hand, such as the temperature and pressure, and disturbing structures inside the tank (such as agitators).

One known way to handle this problem is to use so-called frequency agility or frequency hopping. This is e.g. discussed in the background of the application. In such systems, the transmitter frequency typically jumps around within a small frequency range of a few 100 MHz, or up to 1 GHz. Multiple frequencies are also used in CW radars both as a frequency modulated CW radar (FMCW using a range of frequencies) and multiple frequency CW radar (MFCW).

US 2002/0020216 (Schultheiss) relates to such a frequency agility type radar level gauge. Thus, even if no numerical frequency values are specifically mentioned, the skilled addressee would expect the different frequencies used in these references to be spread out within a relatively narrow frequency range, and definitely within one and the same frequency band, such as one of the conventionally used C, X or K band.

US 6,150,890 (Damgaard) and US 6,026,307 (Blom) both disclose telecommunication systems, where a frequency multiplier is used to provide a higher frequency that is twice that of a lower frequency.

As the frequencies in Schultheiss lie within a narrow range, they are not multiples of each other. Therefore, it would therefore not be obvious to implement a frequency multiplier to provide those frequencies. In fact, it would be extremely complicated to provide a set of closely grouped frequencies used in Schultheiss using frequency multipliers. This opinion is supported by the fact that Schultheiss provides two different examples of how to accomplish the different frequencies, none of which mention a frequency multiplier, despite the fact that frequency multipliers as disclosed in Blom and Damgaard were known well before the filing date of Schultheiss (Blom and Damgaard have filing dates in 1997 and 1998, respectively).

Further, even if the frequency multiplier of Blom or Damgaard somehow was implemented to provide the frequencies in Schultheiss, this would not lead to the invention. As discussed above, Schultheiss does not disclose switching a radar level gauge between two frequency bands that have a ratio between their center frequencies of at least 1.5.

Contrary to the Examiner's statement, it would not be obvious for a person skilled in the art to separate the frequencies in Schultheiss by a factor 1.5 or more. As a person skilled in the art would realize, and as discussed in the present application, using frequencies of widely separated frequency bands in a radar level gauge requires suitable logic to make a good evaluation or averaging of the measured data. Such logic is not mentioned in Schultheiss, where no alterations or modifications of the measurement electronics is discussed. Instead, Schultheiss discloses use of the same electronics for all frequencies. This is a clear indication that Schultheiss

is only concerned with frequency agility within a narrow frequency range, and that the skilled person would not attempt to separate the various frequencies as much as a factor 1.5.

Therefore, it is submitted that the present invention as set forth in the pending claims is not obvious based upon Schultheiss in view of Blom or Damgaard.

In view of the above amendments and remarks it is believed that the present application is in condition for allowance. Reconsideration and favorable action are respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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